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RULES PROCESSING TEAM

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October 16, 2000

Department of the Interior
Minerals Management Service
Mail Stop 4024
381 Elden Street
Herndon, Virginia 20170-4814

Attention: Rules Processing Team

Re: Minerals Management Service Proposed Rule, Outer Continental Shelf Oil and Gas Leasing. 65 FR 55476-55489, September 14, 2000

Dear Sir or Madam:

Union Oil Company of California (Unocal) appreciates the opportunity to provide comments to the Minerals Management Service on the above referenced proposed rule. We also encourage continued dialog with industry and our trade associations as specific incentives for exploration and production are considered, adopted and implemented.

Unocal is currently one of the top ten leaseholders in the deepwater Gulf of Mexico with ownership in over 225 deepwater GoM leases. Unocal is also one of the largest producers in the OCS Gulf of Mexico with average daily net production of approximately 98,000 BOE/D. The rapid growth of Unocal's business in the Deepwater Gulf of Mexico has occurred during the term of the current royalty relief program. Three years ago Unocal held only a small leasehold position in water depths greater than 5,000 feet. The MMS administered program of royalty relief has been a significant and positive influence in creating a new business unit for Unocal. Today, after a significant investment by Unocal in leases, seismic data, people, and a five year commitment to a drillship capable of drilling in frontier plays in water depths up to 10000', Unocal is embarking on a ground breaking drilling program that includes several potentially "basin opening" exploration wells. The current program of royalty relief is an excellent example of economic cooperation between government and industry – a partnership that is continuing to fuel substantial economic activity benefiting the entire nation.

Unocal supports the MMS's proposed rule for the extension of royalty relief for future lease sales. Unocal encourages the MMS to incorporate several fundamental principles into any future royalty relief policies that the MMS develops:

- Future royalty relief policies should feature **certainty and stability.** In light of the time required for the execution for any deepwater drilling and development program, planning for deepwater investments becomes nearly impossible if the royalty relief policies frequently change.

- Future royalty relief policies should feature **predictability.** Operators considering making an application for supplemental deepwater royalty relief should be able to analyze and predict with reasonable accuracy whether MMS would approve the application and the amount of likely relief to be made available.
- Future royalty relief policies should feature an **open process.** To date the MMS has done a superb job of involving industry in the discussion, examination and consideration of future royalty relief policies.

While the current Royalty Relief program has been very successful in generating leasing activity and revenues for the MMS, Unocal believes it is appropriate for the MMS to focus on incentives to accelerate and increase drilling activity and production levels from the deepwater Gulf of Mexico. Alternative approaches to royalty relief should be considered and aimed at addressing the unique challenges of deepwater exploration and production. In addition to the basic principles we mentioned, we recommend the MMS give consideration to the following suggestions:

- Production infrastructure and pipeline costs are one of the most significant and uncertain costs in calculating deepwater economics. Revised royalty relief programs addressing these costs would be a significant incentive for the development of deepwater infrastructure.

- A new rig fleet is now arriving in the Gulf of Mexico. This upgraded fleet will significantly expand the industry's ability to explore in water depths greater than 6000 feet. This upgraded fleet carries a high cost structure and Unocal suggests that any "targeted royalty relief effort" take specific notice of the increased capital investment and operating costs entailed in ultra deepwater exploration and production.

Unocal supports the MMS's rulemaking initiative concerning royalty relief. Some of our suggestions are discussed in more detail in the attached response to specific questions raised in the proposed rule.

Thank you for your consideration of our views.

Sincerely,

Michael S. Bell
Vice President
Deepwater Gulf of Mexico Business Unit

Future Royalty Suspensions

- What factors should we consider, and how should we evaluate these factors, when we choose water depths beyond which bidders still need leasing incentives in the GOM?

  The MMS should consider several factors when choosing water depths in which bidders need leasing incentives:

  - **Increasing water depth is often used as a surrogate measure for the increasing costs of exploration & production. Continuing the MMS's program of water depth based gradations for royalty relief is appropriate.**

  - **Industry is now attempting to drill in increasingly deeper waters in the Gulf of Mexico, with new water depth records being set annually. This activity is only possible because of significant industry investment to upgrade the rig fleet to drill in waters deeper than 6,000 feet. Targeted royalty relief incentives should specifically address and reward investments that expand the industry's exploration capabilities. The use of such drilling rigs to explore the ultra deepwater provinces of the Gulf of Mexico should be a principal factor in selecting the water depths eligible for relief.**

- What elements besides water depth should we consider, and how should we consider them, when deciding how much royalty suspension to offer on new leases?

  - **Sub-salt Exploration & Production:** Much of the unexplored portions of the OCS Gulf of Mexico feature a covering sheet of salt. The presence of this salt sheet both complicates the ability to seismically image the rock strata and increases the costs of obtaining quality seismic images. This salt sheet also complicates drilling operations.

  - **Distance to available production infrastructure:** This may be the single biggest challenge remaining to development in the Gulf of Mexico. Many of the most promising recent deepwater discoveries are located significant distances from existing production infrastructure. The huge costs associated with creating and extending this infrastructure mean that only the very largest of discoveries will be economically profitable in the near term.

  - **Low API gravity crude oil:** Oil discoveries characterized by low API gravity are significantly most difficult and costly to develop. Targeted incentives that improve the economics of these discoveries could have a significant impact in accelerating these developments and increasing production.

- Which of the following leasing policies would encourage more domestic investment, given equal expected rates of return, and why would it do so? One offering a: (a) Substantial royalty suspension volume coupled with higher than normal royalty rates *(e.g.*, 20 percent) for additional production between specified cumulative production volumes; or (b) Modest royalty suspension volume but with only normal lease royalty rates for production above the royalty suspension volume?

- Unocal recommends the MMS continue with the existing royalty rates. Past experiments with variable royalties have not been successful. This is largely due to the need for stability and predictability in provinces where exploration and production uncertainties make the effect of variables royalties difficult to predict.

<u>Lease-Based Royalty Suspension</u>

- Do you agree with our observation that a lease-based royalty relief program, providing a guaranteed royalty suspension volume to each lease regardless of which field it overlies, is preferable to a field-based royalty relief program, providing a royalty suspension volume to be claimed by the earliest producers on a field?

  - Unocal strongly supports a "lease based" approach to applying royalty relief. For the royalty relief program to achieve its goal of encouraging investment, the program must not introduce new uncertainties into the planning and economic modeling process. The field based approach introduced significant uncertainty into the royalty relief program and substantially diminished the positive impact that royalty relief could have upon prospect economics.

Do you share our expectation that royalty suspension volumes tailored to a typical tie-back development will promote bidding and exploration in the deep water areas that will be available in the next several years?

- Co-development of deepwater fields offers a significant prize to both the MMS and industry in terms of capital efficiency, accelerated first production and lowering the minimum economic field size for development. Encouraging earlier cooperation between the owners of undeveloped reserves and the owners of production infrastructure can only be a benefit. However, the benefits should be carefully balanced so as to provide an appropriate economic incentive to both the reserves owner and the facilities owner.

- Is it reasonable to assume between 2 and 3 leases per field will be developed as a tie-back?

  - Unocal can offer little guidance here as the specific circumstances leading to co-development, independent "stand alone" development or no development at all are highly "case specific" and are a culmination of a number of independent variables.

- What benefits would occur for bidders and lessees if we modified the volume suspensions offered on new leases every 3 years as opposed to more frequently?

- Unocal would like to minimize uncertainty when making investment decisions for seismic acquisition and processing and for staffing. In areas such as the sub-salt portions of deepwater, significant lead time is needed to mature prospects for drilling and a consistent, predictable royalty suspension volume is needed. Three years is the minimum to accommodate the significant lead time.

Rental Payments

- What effect, if any, would rental obligations during periods of royalty-free production have on the way firms plan and manage a project?

  - The effects of continued rental payment should be minimal but we encourage the MMS to consider incentives that promote shorter lead times from discovery to development.

- Do you agree with our observation that, given current costs, technology and development options in deep water and the dynamic nature of these factors, the program would benefit from periodic adjustments at the time of lease sales in price thresholds for new leases?

  - No; as stated previously economic terms should be predictable over a time frame of several years in order to encourage the investments that need to be made by industry to prepare for lease sales. MMS should appreciate that frequent changes in the royalty relief program would be a disincentive to industry investment and participation in OCS lease sales.

- Do you believe that adjustments in royalty obligations, other than retroactively for the previous calendar year are desirable? If so, why and what is the nature of the preferred adjustments?

  - No. Certainty is almost always going to be preferable to a variable royalty rate. A variable rate of royalty would be a significant disincentive to investment as industry would now have to adjust our economic models to incorporate the uncertainty associated with the changing rate. Accounting for additional uncertainty can only have the effect of reducing the net present value of the project to industry.

- Do you agree with our preliminary findings that the applicable price thresholds should be 10 to 15 percent below the levels currently applicable under the Act, *e.g.*, $28 rather than $31 per barrel for oil, and $3.45 rather than $3.90 per million British thermal units?

  - **While we support the concept of a price threshold at which royalty suspensions end, it should be borne in mind that industry bears the brunt of low price cycles and high price cycles help to balance this out.**

The current price threshold recognizes the inflation in costs that have occurred since 1995 and it is not an unreasonable level.

Change to Royalty Suspension Policy for Eligible Leases

Does this additional notification step impose any meaningful burden on lessees?

No.